

ABSTRACT OF THE DISCLOSURE

An assembly of heating furnace and semiconductor wafer-holding jig. This assembly includes a furnace body made of refractory or heat insulating material; a heater disposed
5 around the inner side surface of the furnace body; a reaction chamber which forms a uniform heating zone; and a wafer-holding jig. The wafer-holding jig is capable of holding the wafer and advancing and retracting the wafer in the uniform heating region along the longitudinal direction of the furnace body.
10 The front surface of the semiconductor wafer to be heat-treated is substantially in parallel with the surface of the heater. The assembly of the invention can be used in rapid thermal processing and the footprint of the heating furnace can be reduced.